ACC.11
60th Annual Scientific Session & Expo

E1183
JACC April 5, 2011
Volume 57, Issue 14

QUALITY OF CARE AND OUTCOMES ASSESSMENT

ATRIAL FIBRILLATION AND CONGESTIVE HEART FAILURE: A COST ANALYSIS OF RATE VERSUS RHYTHM CONTROL STRATEGIES

ACC Poster Contributions
Ernest N. Morial Convention Center, Hall F
Sunday, April 03, 2011, 10:00 a.m.-11:15 a.m.

Session Title: Cost-Effectiveness and Cost of Care
Abstract Category: 47. Appropriateness, Pay for Performance, Cost of Care
Session-Poster Board Number: 1034-138

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Background: Atrial fibrillation (AF) and heart failure (HF) are highly prevalent conditions that often coexist. The associated financial burden is tremendous. In the AF-CHF trial that compared rhythm vs rate control strategies in symptomatic patients with HF and AF, no differences were found in primary and secondary efficacy end-points, including cardiovascular death. The objective of this study was to determine whether cost analyses favoured one approach over the other.

Methods: All AF-CHF patients from Quebec were analyzed from a single-payer perspective. The temporal horizon was limited to in-trial patient-specific resource utilization including hospitalisations, cardiovascular (CV) procedures, emergency room visits (ER), all other ambulatory encounters, and medications. Data was derived from the physician's services and claims database and the pharmaceutical database from the Régie de l'assurance-maladie du Québec (RAMQ). Disease specific per diem costs of hospitalizations and procedures were estimated from the Ontario Case Costing Initiative. ER costs were based on data from the Montreal Heart Institute. All costs were expressed in 2009 Canadian dollars.

Results: A total of 304 patients were included. Patients assigned to rate control were hospitalized for longer periods (33.6 vs 29.6 days per patient, P=0.36). CV procedures were less frequent in the rate control group (146 vs 238), predominantly driven by a higher number of cardioversions. Defibrillators and biventricular pacemakers were more commonly implanted in the rate control group. Pharmaceutical expenditures were similar ($9,681 vs $10,308 per patient, P=0.55). ER and other ambulatory encounters were likewise similar. Overall, the mean total medical cost per patient during the AF-CHF trial was estimated to be $78,767 with rate control group and $72,764 with rhythm control (p=0.49).

Conclusions: The overall financial burden is similar with rhythm versus rate control strategies in patients with AF and HF. Despite the added cost of therapy needed to maintain sinus rhythm in the rhythm control group, this was counterbalanced by increased costs for hospitalisations in the rate control group.